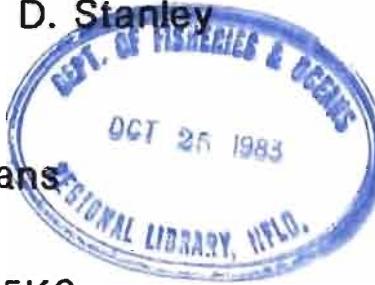


An Inventory of Groundfish Samples Collected by Observers on Domestic Trawlers off Canada's Pacific Coast, 1981-1982

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V9R 5K6



August 1983

**Canadian Data Report of
Fisheries and Aquatic Sciences
No. 405**



Government of Canada
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Pêches et Océans

Canadian Data Report of Fisheries and Aquatic Sciences

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Rapport statistique canadien des sciences halieutiques et aquatiques

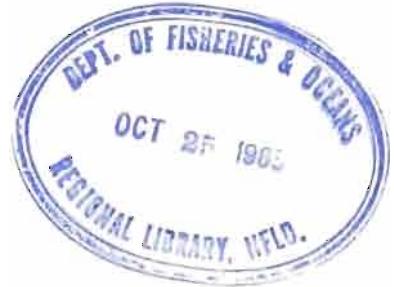
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Les numéros 1 à 25 de cette série ont été publiés à titre de Records statistiques, Service des pêches et de la mer. Les numéros 26-160 ont été publiés à titre de Rapports statistiques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 161.

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Canadian Data Report of
Fisheries and Aquatic Sciences No. 405

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AN INVENTORY OF GROUNDFISH SAMPLES COLLECTED
BY OBSERVERS ON DOMESTIC TRAWLERS OFF CANADA'S
PACIFIC COAST, 1981-1982

by

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ABSTRACT

Davenport, D., J. R. Selsby, and R. D. Stanley. 1983. An inventory of groundfish samples collected by observers on domestic trawlers off Canada's Pacific Coast, 1981-1982. Can. Data Rep. Fish. Aquat. Sci. 405: iv + 35 p.

Observers from the Pacific Biological Station conducted 33 observer trips aboard B.C. domestic trawlers in 1981 and 1982. The primary purpose of the program was to examine the amount and composition of fish discarded at sea during routine commercial bottom trawling.

The present report summarizes the methods that were used, the distribution of the trips by date and location, and the biological samples and records that were collected.

Key words: discards, groundfish, trawl

RÉSUMÉ

Davenport, D., J. R. Selsby, and R. D. Stanley. 1983. An inventory of groundfish samples collected by observers on domestic trawlers off Canada's Pacific Coast, 1981-1982. Can. Data Rep. Fish. Aquat. Sci. 405: iv + 35 p.

Des observateurs de la Station de biologie du Pacifique ont réalisé 33 voyages d'observation à bord de chalutiers canadiens de la Colombie-Britannique, en 1981 et 1982. Ce programme visait premièrement l'examen de la quantité et de la composition des prises rejetées à la mer au cours des opérations courantes de chalutage commercial sur le fond.

Le présent rapport résume les méthodes utilisées, la répartition des voyages selon la date et l'endroit et, enfin, les échantillons et les données biologiques recueillies.

Mots-clés: quantités rejetées, poissons démersaux, chalut

INTRODUCTION

Staff from the Pacific Biological Station at Nanaimo conducted a total of 33 observer trips aboard B.C. domestic trawlers in 1981 and 1982. The primary purpose of the program is to collect background information on the amount and composition of fish discards at sea during normal commercial trawling operations.

The data will be used to quantify the impact of discarding on the productivity of the various stocks and to upgrade the catch data upon which groundfish stock assessments are largely based.

Our objective for the first two years of observations has been to examine the situation from as broad a perspective as possible. Continuing work will examine more specific questions as well as monitoring year-to-year variability.

The purpose of this data report is to acquaint potential users of the data with the methods that are being used and to summarize the sample data that have been collected. Actual discard analyses for individual species will be presented in subsequent reports as considered appropriate.

METHODS

The basic procedure involved having an observer accompany a fishing vessel for a complete fishing trip. While on board, the observer collected information on the location and depths of all hauls, recorded weight estimates of all species captured, and sampled both keepers and discards of commercial species.

Participation in the program was voluntary on the part of the fishing skippers. From opportunities presented, selection of trawl trips was made on the basis of area to be fished and the planned target species. Hecate Strait and Queen Charlotte Sound were primary and secondary priorities, respectively. English sole, rock sole, Pacific cod, sablefish and halibut were the primary species to be sampled. Trips which were expected to concentrate on rockfish were avoided as there are virtually no discards associated with these fisheries.

For each trip, the observer first collected general information for the trip as a whole. This information included date and port of landing, processor, and fish chilling procedure. When agreed to by skippers, the general net specifications were also recorded.

Information taken with each haul included the date and haul number, location, time of start and finish, Loran position at start and finish, plus depth information. The latter information included: depth mode as the depth

at which most of the haul was made; target depth as the depth aimed for when the gear was set; and the depth range. In the first trips, range was the depths at the beginning and end of the haul, or at the turning point if the vessel doubled back on the haul or altered course drastically during it. On later trips this was the maximum and minimum depths attained through the haul.

Estimates of total catch weight and species weight were made for every haul. The filled portion of the cod-end below the splitting strap contained a roughly known weight, multiples or portions of deck pens filled gave a second estimate. Species dominating the catch were estimated as a percentage of the total and then converted to pounds. Minor portions of the total were estimated directly in pounds. For species which were sorted by size into discards and keepers, we estimated the respective proportions, and after sorting and sampling was completed used the sample results and fishermen's estimates to verify or adjust them.

Estimations of halibut discards was conducted differently, taking one of three forms. When possible, we measured all halibut prior to release for conversion later to total weight, with the following formula (I. McGregor, I.P.H.C. pers. comm.):

$$\text{Weight (lbs)} = 0.0000092043 \times \text{Length (cm)}^{3.24}$$

If it wasn't possible to measure all halibut, then an attempt was made to obtain a total count. If a count was not possible owing to conflicting sampling duties, then a visual estimate of total weight was recorded. A greater emphasis was attached to measuring and counting halibut in 1982.

When the total catch was aboard, the crew began the sorting process. Marketable sized fish of commercial species were picked or pewed into separate deck pens, baskets, or directly into the ice-hold or tanks. Discards of these species plus all non-commercial and prohibited species were left on deck for later disposal or allowed to pass through the scuppers as sorting progressed. If baskets were utilized, weight per basket times number of baskets provided estimates of total weight; if deck pens, a volume-weight estimate was used; if put directly below, close observation and/or the crew's estimate provided the most accurate figure. If a pre-sort sample was taken, the keeper-discard ratio found could be applied to the whole catch of that species if thought to be appropriate.

Choice of species sampled was based on (a) target species for the haul; (2) abundance of that species within the haul (minimum of 75 fish for a sample); and (3) number of samples of a given species already taken on the ground. Halibut, sparsely sampled in 1981, were sampled approximately every fourth haul in 1982, more often when catches contained no species of higher priority or when sampling was light.

Samples were either "pre-sort", "discard" or "keeper". A pre-sort sample was a representative collection of the chosen species taken before the crew had done any separating of keepers from discards. "Discard" samples were taken from what was left of the selected species after the crew had removed the keepers. "Keeper" samples were a collection of those kept by the crew.

Pre-sort samples were sorted by the observer into keepers and discards at the designated market size limit to provide a backup estimate of the proportion. The division point was rarely identical to the sorting by the crew. There was invariably an overlap of discards into the keepers and, to a lesser degree, keepers into the discards. Crew cooperation in permitting the observer to collect his sample unhindered, or in assisting with the collecting and handling was always excellent and greatly appreciated.

Samples were collected in rectangular plastic baskets through which water could freely drain. Filled baskets were brought to the sampling area, the fish measured to the nearest centimeter, and, in a pre-sort sample, separated into keepers and discards and weighed accordingly. Weighing was a one-man job using a fulcrum bar between lifting bridle and hanging scale (Selsby, in prep.). Weight varied between 35-50 kg per basket depending upon species and sizes.

In 1982 sampling, discards were generally sexed, keepers could not be, as opening the visceral cavity contaminated the ice or brine in which they were stored. Sexing of very small discards (19 cm or less) was not attempted. At times, malformation or mutilation of the gonads made sex identification of a mature fish impossible, these were recorded as unknown as opposed to un-examined.

The keeper-discard division size for a given species often varied within the fleet. Processing plant size limits varied slightly, depending upon their markets. Vessel selection varied depending on the captain/crew interpretation of the processors' limits and, on some boats, the general size of each commercial species within each haul as well as the mix and total catch of the haul. Sorting also varied between consecutive trips by the same boat.

Upon completion of an observer trip, the information was encoded and then stored directly on the PBS computer using an interactive input procedure. The data is stored in four formats corresponding with the bridge-log data, catch data, sample background data and biological or individual fish data.

RESULTS

We have shown in Table 1 and Table 2 the distribution of trips by date and location for 1981 and 1982. This will provide an indication of the times and locations for which we have catch information.

Tables 3 and 4 show the inventory of samples by species, location, month and sample type for 1981 and 1982 respectively. Species are ordered by code number in ascending order.

ACKNOWLEDGMENTS

The examination of discarding would of course not be possible without voluntary participation by trawl skippers and their crews. We are grateful to the individuals who have cooperated and assisted with the study. We would like to point out that this cooperation reflects their genuine desire to assist with the rational exploitation of B.C. groundfish resources.

Table 1. OBSERVER TRIPS : 1981

| TRIP CODE | VESSEL CODE | LANDING DATE | MAJOR | MINOR | NUMBER OF HAULS |
|-----------|-------------|--------------|-------|-------|-----------------|
| 8101 | 376 | 13/03/81 | 05 | 11 | 6 |
| | | | 06 | 08 | 7 |
| 8102 | 376 | 10/04/81 | 05 | 11 | 3 |
| | | | 06 | 08 | 21 |
| | | | 07 | 02 | 2 |
| | | | 07 | 06 | 3 |
| 8103 | 372 | 20/04/81 | 07 | 02 | 2 |
| | | | 08 | 05 | 15 |
| 8104 | 372 | 28/04/81 | 08 | 04 | 5 |
| | | | 08 | 05 | 13 |
| 8105 | 259 | 30/04/81 | 08 | 04 | 15 |
| 8106 | 259 | 07/05/81 | 08 | 04 | 16 |
| 8107 | 386 | 14/05/81 | 07 | 02 | 4 |
| | | | 08 | 05 | 19 |
| 8108 | 380 | 14/05/81 | 08 | 03 | 1 |
| | | | 08 | 04 | 22 |
| | | | 08 | 05 | 10 |
| 8109 | 386 | 28/05/81 | 07 | 02 | 11 |
| | | | 07 | 06 | 1 |
| | | | 08 | 05 | 20 |
| 8110 | 360 | 13/06/81 | 05 | 11 | 5 |
| | | | 06 | 08 | 30 |

Table 1 (cont'd)

OBSERVER TRIPS : 1981

| TRIP CODE | VESSEL CODE | LANDING DATE | MAJOR | MINOR | NUMBER OF HAULS |
|-----------|-------------|--------------|-------|-------|-----------------|
| 8111 | 387 | 27/07/81 | 06 | 08 | 34 |
| 8112 | 372 | 19/08/81 | 07 | 02 | 4 |
| | | | 07 | 06 | 11 |
| | | | 08 | 05 | 14 |
| 8113 | 380 | 27/08/81 | 08 | 04 | 22 |
| 8114 | 445 | 08/09/81 | 08 | 04 | 21 |
| 8115 | 445 | 16/09/81 | 07 | 02 | 5 |
| | | | 07 | 06 | 1 |
| | | | 08 | 04 | 8 |
| 8116 | 424 | 19/09/81 | 08 | 04 | 8 |
| 8117 | 376 | 07/10/81 | 05 | 11 | 4 |
| | | | 06 | 08 | 20 |

Table 2. OBSERVER TRIPS : 1982

| TRIP CODE | VESSEL CODE | LANDING DATE | MAJOR | MINOR | NUMBER OF HAULS |
|-----------|-------------|--------------|-------|-------|-----------------|
| 8201 | 424 | 22/02/82 | 08 | 04 | 21 |
| | | | 08 | 05 | 1 |
| 8202 | 295 | 29/03/82 | 08 | 04 | 10 |
| | | | 08 | 05 | 10 |
| 8203 | 376 | 01/04/82 | 05 | 11 | 7 |
| | | | 06 | 08 | 7 |
| | | | 07 | 02 | 5 |
| 8204 | 376 | 12/04/82 | 05 | 11 | 2 |
| | | | 06 | 08 | 5 |
| | | | 07 | 02 | 6 |
| | | | 08 | 04 | 4 |
| | | | 08 | 05 | 18 |
| 8205 | 295 | 12/04/82 | 08 | 04 | 12 |
| | | | 08 | 05 | 11 |
| 8206 | 338 | 12/05/82 | 05 | 11 | 15 |
| | | | 06 | 08 | 15 |
| 8207 | 363 | 17/05/82 | 05 | 11 | 12 |
| | | | 06 | 08 | 12 |
| 8208 | 259 | 17/05/82 | 08 | 04 | 20 |
| 8209 | 383 | 26/05/82 | 08 | 05 | 22 |
| 8210 | 383 | 01/06/82 | 07 | 02 | 11 |
| | | | 08 | 05 | 13 |

Table 2 (cont'd)

OBSERVER TRIPS : 1982

| TRIP CODE | VESSEL CODE | LANDING DATE | MAJOR | MINOR | NUMBER OF HAULS |
|-----------|-------------|--------------|----------------------|----------------------|-------------------|
| 8211 | 422 | 29/06/82 | 05 06 | 11 08 | 12 29 |
| 8212 | 424 | 26/07/82 | 08 | 04 | 24 |
| 8213 | 383 | 09/06/82 | 07 07 08 | 02 06 05 | 26 1 5 |
| 8214 | 445 | 19/09/82 | 08 | 04 | 41 |
| 8215 | 445 | 28/09/82 | 07 08 08 08 | 02 03 04 05 | 7 1 16 2 |
| 8216 | 424 | 29/11/82 | 05 07 08 | 11 02 05 | 4 8 5 |

Table 3. PACIFIC COD : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 31/03/81 | 8102 | 2 | PRE-SORT | 133 | YES | YES |
| 11 | 09/06/81 | 8110 | 11 | DISCARDS | 150 | YES | YES |
| 11 | 09/06/81 | 8110 | 12 | DISCARDS | 238 | YES | YES |
| MAJOR= 06 | | | | | | | |
| 08 | 11/06/81 | 8110 | 20 | PRE-SORT | 173 | YES | NO |
| 08 | 11/06/81 | 8110 | 21 | DISCARDS | 79 | YES | YES |
| 08 | 12/06/81 | 8110 | 24 | DISCARDS | 113 | YES | YES |
| 08 | 12/06/81 | 8110 | 25 | DISCARDS | 85 | YES | YES |
| 08 | 12/06/81 | 8110 | 27 | DISCARDS | 81 | YES | YES |
| 08 | 20/07/81 | 8111 | 3 | DISCARDS | 38 | YES | NO |
| 08 | 21/07/81 | 8111 | 11 | DISCARDS | 91 | YES | YES |
| 08 | 11/03/81 | 8101 | 5 | PRE-SORT | 148 | YES | NO |
| 08 | 01/04/81 | 8102 | 6 | PRE-SORT | 54 | YES | YES |
| 08 | 03/04/81 | 8102 | 9 | PRE-SORT | 77 | YES | YES |
| 08 | 03/04/81 | 8102 | 10 | PRE-SORT | 129 | YES | YES |
| 08 | 06/04/81 | 8102 | 14 | PRE-SORT | 81 | YES | YES |
| 08 | 06/04/81 | 8102 | 15 | PRE-SORT | 87 | YES | NO |
| 08 | 07/04/81 | 8102 | 17 | PRE-SORT | 92 | YES | NO |
| 08 | 07/04/81 | 8102 | 18 | PRE-SORT | 85 | YES | NO |
| 08 | 07/04/81 | 8102 | 19 | PRE-SORT | 95 | YES | NO |
| 08 | 08/04/81 | 8102 | 21 | PRE-SORT | 75 | YES | NO |
| 08 | 08/04/81 | 8102 | 22 | PRE-SORT | 96 | YES | NO |
| 08 | 03/04/81 | 8102 | 11 | KEEPERS | 91 | YES | YES |
| 08 | 06/04/81 | 8102 | 13 | KEEPERS | 124 | YES | NO |
| 08 | 02/10/81 | 8117 | 7 | PRE-SORT | 110 | YES | NO |
| 08 | 02/10/81 | 8117 | 9 | PRE-SORT | 75 | YES | NO |
| 08 | 03/10/81 | 8117 | 15 | PRE-SORT | 76 | YES | NO |
| MAJOR= 07 | | | | | | | |
| 02 | 09/04/81 | 8102 | 28 | PRE-SORT | 152 | YES | NO |
| 02 | 09/04/81 | 8102 | 29 | PRE-SORT | 80 | YES | NO |
| 06 | 09/04/81 | 8102 | 25 | PRE-SORT | 88 | YES | NO |

Table 3 (cont'd)

PACIFIC COD : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 04 | 26/04/81 | 8105 | 1 | PRE-SORT | 124 | YES | NO |
| 04 | 26/04/81 | 8105 | 2 | PRE-SORT | 154 | YES | NO |
| 04 | 26/04/81 | 8105 | 3 | PRE-SORT | 153 | YES | NO |
| 04 | 28/04/81 | 8105 | 5 | PRE-SORT | 170 | YES | NO |
| 04 | 28/04/81 | 8105 | 6 | PRE-SORT | 151 | YES | NO |
| 04 | 29/04/81 | 8105 | 12 | PRE-SORT | 176 | YES | NO |
| 04 | 29/04/81 | 8105 | 13 | PRE-SORT | 79 | YES | NO |
| 04 | 03/05/81 | 8106 | 2 | PRE-SORT | 150 | YES | NO |
| 04 | 03/05/81 | 8106 | 3 | PRE-SORT | 165 | YES | NO |
| 04 | 04/05/81 | 8106 | 5 | PRE-SORT | 191 | YES | NO |
| 04 | 05/05/81 | 8106 | 8 | PRE-SORT | 186 | YES | NO |
| 04 | 06/05/81 | 8106 | 11 | PRE-SORT | 152 | YES | NO |
| 04 | 06/05/81 | 8106 | 13 | PRE-SORT | 155 | YES | NO |
| 04 | 07/05/81 | 8106 | 15 | PRE-SORT | 180 | YES | NO |
| 04 | 03/05/81 | 8106 | 1 | DISCARDS | 99 | YES | NO |
| 04 | 12/09/81 | 8115 | 2 | KEEPERS | 81 | YES | NO |
| 04 | 24/04/81 | 8104 | 6 | DISCARDS | 60 | YES | YES |
| 04 | 11/05/81 | 8108 | 20 | PRE-SORT | 231 | YES | NO |
| 04 | 03/09/81 | 8114 | 4 | KEEPERS | 98 | YES | NO |
| 04 | 15/09/81 | 8115 | 13 | KEEPERS | 120 | YES | NO |
| 05 | 15/04/81 | 8103 | 1 | PRE-SORT | 47 | YES | NO |
| 05 | 16/04/81 | 8103 | 3 | PRE-SORT | 116 | YES | NO |
| 05 | 16/04/81 | 8103 | 4 | PRE-SORT | 68 | YES | NO |
| 05 | 16/04/81 | 8103 | 6 | PRE-SORT | 43 | YES | NO |
| 05 | 16/04/81 | 8103 | 7 | PRE-SORT | 21 | YES | NO |
| 05 | 19/04/81 | 8103 | 14 | PRE-SORT | 114 | YES | NO |
| 05 | 19/04/81 | 8103 | 15 | PRE-SORT | 90 | YES | NO |
| 05 | 19/04/81 | 8103 | 16 | PRE-SORT | 35 | YES | NO |
| 05 | 23/04/81 | 8104 | 2 | PRE-SORT | 154 | YES | NO |
| 05 | 25/04/81 | 8104 | 11 | PRE-SORT | 151 | YES | NO |
| 05 | 23/04/81 | 8104 | 4 | DISCARDS | 46 | YES | YES |
| 05 | 25/04/81 | 8104 | 12 | DISCARDS | 193 | YES | NO |
| 05 | 26/04/81 | 8104 | 17 | DISCARDS | 75 | YES | YES |
| 05 | 07/05/81 | 8107 | 5 | PRE-SORT | 46 | YES | NO |

Table 3 (cont'd)

POLLOCK : OBSERVER SAMPLES 1981

| | MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|-----------|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | | |
| | 04 | 10/05/81 | 8108 | 7 | PRE-SORT | 128 | YES | YES |

SABLEFISH: OBSERVER SAMPLES 1981

| | MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|-----------|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 06 | | | | | | | | |
| | 08 | 08/06/81 | 8110 | 6 | DISCARDS | 81 | YES | YES |
| | 08 | 14/06/81 | 8110 | 33 | DISCARDS | 83 | YES | YES |
| | 08 | 20/07/81 | 8111 | 4 | DISCARDS | 72 | YES | YES |
| | 08 | 20/07/81 | 8111 | 5 | DISCARDS | 75 | YES | YES |
| | 08 | 01/04/81 | 8102 | 8 | PRE-SORT | 116 | YES | NO |
| MAJOR= 07 | | | | | | | | |
| | 02 | 21/05/81 | 8109 | 1 | DISCARDS | 39 | YES | YES |
| | 02 | 25/05/81 | 8109 | 19 | DISCARDS | 33 | YES | YES |
| | 06 | 17/08/81 | 8112 | 23 | PRE-SORT | 58 | YES | YES |
| MAJOR= 08 | | | | | | | | |
| | 04 | 29/04/81 | 8105 | 10 | PRE-SORT | 92 | YES | NO |
| | 05 | 15/08/81 | 8112 | 8 | DISCARDS | 26 | YES | NO |
| | 05 | 15/08/81 | 8112 | 11 | DISCARDS | 96 | YES | YES |
| | 05 | 16/08/81 | 8112 | 14 | DISCARDS | 100 | YES | YES |
| | 05 | 13/05/81 | 8108 | 27 | PRE-SORT | 293 | YES | YES |
| | 05 | 13/05/81 | 8108 | 32 | PRE-SORT | 149 | YES | NO |

Table 3 (cont'd)

LINGCOD : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 28/09/81 | 8117 | 3 | PRE-SORT | 21 | YES | NO |
| 11 | 28/09/81 | 8117 | 4 | PRE-SORT | 134 | YES | NO |

TURBOT : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 05 | 15/08/81 | 8112 | 7 | DISCARDS | 25 | YES | NO |
| 05 | 15/08/81 | 8112 | 8 | DISCARDS | 47 | YES | NO |
| 05 | 13/05/81 | 8108 | 30 | PRE-SORT | 218 | YES | NO |

REX SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 05 | 15/08/81 | 8112 | 7 | DISCARDS | 57 | YES | NO |
| 05 | 15/08/81 | 8112 | 8 | DISCARDS | 39 | YES | NO |

Table 3 (cont'd)

HALIBUT : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| MAJOR= 05 | | | | | | |
| 11 | 07/06/81 | 8110 | 1 | 100.0 | 3 | 4 |
| 11 | 09/06/81 | 8110 | 11 | 100.0 | 4 | 29 |
| 11 | 09/06/81 | 8110 | 12 | 100.0 | 4 | 14 |
| 11 | 09/06/81 | 8110 | 13 | 100.0 | 6 | 23 |
| 11 | 09/06/81 | 8110 | 10 | 32.1 | 53 | 111 |
| MAJOR= 06 | | | | | | |
| 08 | 07/06/81 | 8110 | 2 | 100.0 | 4 | 10 |
| 08 | 11/06/81 | 8110 | 20 | 100.0 | 4 | 15 |
| 08 | 11/06/81 | 8110 | 22 | 100.0 | 4 | 19 |
| 08 | 11/06/81 | 8110 | 23 | 100.0 | 4 | 19 |
| 08 | 12/06/81 | 8110 | 24 | 100.0 | 8 | 59 |
| 08 | 12/06/81 | 8110 | 26 | 100.0 | 8 | 43 |
| 08 | 07/06/81 | 8110 | 4 | 100.0 | 6 | 24 |
| 08 | 08/06/81 | 8110 | 5 | 100.0 | 7 | 32 |
| 08 | 08/06/81 | 8110 | 7 | 100.0 | 17 | 131 |
| 08 | 08/06/81 | 8110 | 8 | 100.0 | 10 | 72 |
| 08 | 08/06/81 | 8110 | 9 | 100.0 | 5 | 22 |
| 08 | 10/06/81 | 8110 | 14 | 100.0 | 7 | 31 |
| 08 | 10/06/81 | 8110 | 15 | 100.0 | 10 | 22 |
| 08 | 10/06/81 | 8110 | 16 | 100.0 | 8 | 36 |
| 08 | 11/06/81 | 8110 | 19 | 100.0 | 5 | 14 |
| 08 | 13/06/81 | 8110 | 32 | 100.0 | 3 | 6 |
| 08 | 14/06/81 | 8110 | 33 | 100.0 | 3 | 5 |
| 08 | 14/06/81 | 8110 | 34 | 100.0 | 6 | 32 |
| 08 | 13/06/81 | 8110 | 29 | 100.0 | 10 | 47 |
| 08 | 13/06/81 | 8110 | 31 | 100.0 | 9 | 22 |
| MAJOR= 07 | | | | | | |
| 02 | 21/05/81 | 8109 | 1 | 100.0 | 12 | 18 |
| 02 | 21/05/81 | 8109 | 4 | 83.3 | 18 | 15 |
| 02 | 21/05/81 | 8109 | 5 | 100.0 | 12 | 107 |
| 02 | 24/05/81 | 8109 | 14 | 100.0 | 6 | 23 |
| 02 | 25/05/81 | 8109 | 15 | 100.0 | 12 | 29 |
| 02 | 25/05/81 | 8109 | 16 | 100.0 | 32 | 86 |
| 02 | 25/05/81 | 8109 | 18 | 100.0 | 1 | 5 |
| 02 | 14/08/81 | 8112 | 1 | 73.9 | 23 | 31 |
| 02 | 14/08/81 | 8112 | 2 | 85.2 | 26 | 49 |
| 02 | 14/08/81 | 8112 | 3 | 58.6 | 29 | 40 |
| 02 | 14/08/81 | 8112 | 4 | 71.4 | 14 | 13 |
| 02 | 22/05/81 | 8109 | 6 | 100.0 | 64 | 125 |

Table 3 (cont'd)

HALIBUT : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| MAJOR= 07 | | | | | | |
| 06 | 14/08/81 | 8112 | 5 | 100.0 | 3 | 4 |
| 06 | 17/08/81 | 8112 | 21 | 100.0 | 3 | 16 |
| 06 | 17/08/81 | 8112 | 23 | 100.0 | 1 | 10 |
| 06 | 17/08/81 | 8112 | 24 | 100.0 | 2 | 5 |
| 06 | 18/08/81 | 8112 | 26 | 100.0 | 2 | 5 |
| 06 | 18/08/81 | 8112 | 27 | 100.0 | 1 | 1 |
| 06 | 18/08/81 | 8112 | 28 | 100.0 | 1 | 4 |
| 06 | 14/08/81 | 8112 | 6 | 85.7 | 7 | 73 |
| MAJOR= 08 | | | | | | |
| 04 | 03/05/81 | 8106 | 2 | 100.0 | 35 | 78 |
| 04 | 04/05/81 | 8106 | 4 | 100.0 | 50 | 83 |
| 04 | 04/05/81 | 8106 | 6 | 100.0 | 66 | 124 |
| 04 | 07/05/81 | 8106 | 16 | 100.0 | 35 | 69 |
| 04 | 20/08/81 | 8113 | 2 | 100.0 | 20 | 73 |
| 04 | 23/08/81 | 8113 | 7 | 100.0 | 57 | 225 |
| 04 | 23/08/81 | 8113 | 8 | 100.0 | 67 | 232 |
| 04 | 24/08/81 | 8113 | 9 | 23.3 | 43 | 30 |
| 04 | 26/08/81 | 8113 | 22 | 50.0 | 30 | 48 |
| 04 | 20/08/81 | 8113 | 4 | 100.0 | 18 | 61 |
| 04 | 24/08/81 | 8113 | 14 | 100.0 | 5 | 26 |
| 04 | 24/08/81 | 8113 | 10 | 97.7 | 176 | 616 |
| 04 | 24/08/81 | 8113 | 11 | 76.0 | 25 | 44 |
| 04 | 24/08/81 | 8113 | 12 | 84.9 | 192 | 614 |
| 04 | 24/08/81 | 8113 | 13 | 28.4 | 141 | 129 |
| 04 | 25/08/81 | 8113 | 15 | 20.0 | 215 | 142 |
| 04 | 25/08/81 | 8113 | 16 | 56.0 | 75 | 152 |
| 04 | 25/08/81 | 8113 | 17 | 93.0 | 67 | 195 |
| 04 | 25/08/81 | 8113 | 18 | 65.5 | 55 | 119 |
| 04 | 26/08/81 | 8113 | 19 | 56.3 | 16 | 22 |
| 04 | 26/08/81 | 8113 | 20 | 60.8 | 148 | 239 |
| 04 | 26/08/81 | 8113 | 21 | 66.7 | 6 | 14 |
| 05 | 22/05/81 | 8109 | 9 | 100.0 | 15 | 35 |
| 05 | 23/05/81 | 8109 | 10 | 100.0 | 60 | 85 |
| 05 | 23/05/81 | 8109 | 11 | 100.0 | 7 | 13 |
| 05 | 25/05/81 | 8109 | 20 | 100.0 | 49 | 92 |
| 05 | 26/05/81 | 8109 | 21 | 100.0 | 20 | 37 |
| 05 | 26/05/81 | 8109 | 22 | 100.0 | 83 | 120 |
| 05 | 26/05/81 | 8109 | 23 | 100.0 | 79 | 159 |
| 05 | 26/05/81 | 8109 | 24 | 100.0 | 28 | 55 |
| 05 | 26/05/81 | 8109 | 25 | 100.0 | 8 | 16 |
| 05 | 15/08/81 | 8112 | 7 | 100.0 | 3 | 11 |
| 05 | 15/08/81 | 8112 | 8 | 100.0 | 4 | 20 |
| 05 | 16/08/81 | 8112 | 14 | 100.0 | 2 | 8 |

Table 3 (cont'd)

HALIBUT : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| 05 | 16/08/81 | 8112 | 15 | 100.0 | 1 | 3 |
| 05 | 16/08/81 | 8112 | 16 | 100.0 | 4 | 16 |
| 05 | 16/08/81 | 8112 | 17 | 100.0 | 6 | 24 |
| 05 | 16/08/81 | 8112 | 19 | 100.0 | 1 | 4 |
| 05 | 15/08/81 | 8112 | 9 | 73.3 | 15 | 58 |
| 05 | 15/08/81 | 8112 | 10 | 71.4 | 7 | 36 |
| 05 | 16/08/81 | 8112 | 20 | 66.7 | 3 | 9 |
| 05 | 22/05/81 | 8109 | 7 | 100.0 | 2 | 1 |
| 05 | 24/05/81 | 8109 | 12 | 100.0 | 4 | 3 |
| 05 | 24/05/81 | 8109 | 13 | 100.0 | 4 | 9 |
| 05 | 27/05/81 | 8109 | 26 | 100.0 | 36 | 104 |
| 05 | 27/05/81 | 8109 | 27 | 100.0 | 12 | 92 |
| 05 | 27/05/81 | 8109 | 28 | 100.0 | 2 | 15 |
| 05 | 27/05/81 | 8109 | 30 | 100.0 | 4 | 54 |
| 05 | 27/05/81 | 8109 | 31 | 100.0 | 12 | 23 |
| 05 | 28/05/81 | 8109 | 32 | 100.0 | 35 | 184 |
| 05 | 22/05/81 | 8109 | 8 | 50.0 | 2 | 9 |

BUTTER SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|

MAJOR= 08

| | | | | | | | |
|----|----------|------|---|----------|-----|-----|----|
| 04 | 04/05/81 | 8106 | 6 | PRE-SORT | 106 | YES | NO |
|----|----------|------|---|----------|-----|-----|----|

Table 3 (cont'd)

ROCK SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 09/06/81 | 8110 | 10 | PRE-SORT | 143 | YES | NO |
| 11 | 09/06/81 | 8110 | 10 | DISCARD | 88 | YES | NO |
| MAJOR= 06 | | | | | | | |
| 08 | 07/06/81 | 8110 | 2 | PRE-SORT | 49 | YES | NO |
| 08 | 12/06/81 | 8110 | 28 | DISCARDS | 32 | YES | NO |
| 08 | 21/07/81 | 8111 | 14 | DISCARDS | 126 | YES | NO |
| 08 | 29/09/81 | 8117 | 5 | PRE-SORT | 94 | YES | NO |
| 08 | 13/06/81 | 8110 | 29 | DISCARDS | 22 | YES | NO |
| 08 | 03/10/81 | 8117 | 16 | PRE-SORT | 134 | YES | NO |
| 08 | 02/10/81 | 8117 | 6 | DISCARDS | 80 | YES | NO |
| 08 | 23/07/81 | 8111 | 27 | DISCARDS | 148 | YES | NO |
| MAJOR= 07 | | | | | | | |
| 02 | 09/04/81 | 8102 | 28 | PRE-SORT | 167 | YES | NO |
| 02 | 09/04/81 | 8102 | 29 | PRE-SORT | 96 | YES | NO |
| 02 | 07/05/81 | 8107 | 2 | PRE-SORT | 80 | YES | YES |
| 02 | 21/05/81 | 8109 | 4 | PRE-SORT | 57 | YES | YES |
| 02 | 25/05/81 | 8109 | 15 | PRE-SORT | 36 | YES | NO |
| 02 | 25/05/81 | 8109 | 17 | PRE-SORT | 29 | YES | NO |
| 02 | 07/05/81 | 8107 | 2 | DISCARDS | 39 | YES | YES |
| 02 | 21/05/81 | 8109 | 4 | DISCARDS | 76 | YES | YES |
| 02 | 25/05/81 | 8109 | 17 | DISCARDS | 39 | YES | YES |
| MAJOR= 08 | | | | | | | |
| 04 | 26/04/81 | 8105 | 1 | PRE-SORT | 80 | YES | NO |
| 04 | 28/04/81 | 8105 | 7 | PRE-SORT | 153 | YES | NO |
| 04 | 29/04/81 | 8105 | 11 | PRE-SORT | 189 | YES | NO |
| 04 | 30/04/81 | 8105 | 15 | PRE-SORT | 189 | YES | NO |
| 04 | 04/05/81 | 8106 | 4 | PRE-SORT | 308 | YES | NO |
| 04 | 04/05/81 | 8106 | 7 | PRE-SORT | 204 | YES | NO |
| 04 | 05/05/81 | 8106 | 9 | PRE-SORT | 238 | YES | NO |
| 04 | 05/05/81 | 8106 | 10 | PRE-SORT | 312 | YES | NO |
| 04 | 06/05/81 | 8106 | 12 | PRE-SORT | 268 | YES | NO |
| 04 | 06/05/81 | 8106 | 14 | PRE-SORT | 284 | YES | NO |
| 04 | 07/05/81 | 8106 | 16 | PRE-SORT | 216 | YES | NO |
| 04 | 05/09/81 | 8114 | 11 | PRE-SORT | 115 | YES | NO |
| 04 | 07/09/81 | 8114 | 18 | PRE-SORT | 77 | YES | NO |
| 04 | 12/09/81 | 8115 | 2 | KEEPERS | 77 | YES | NO |
| 04 | 05/09/81 | 8114 | 12 | PRE-SORT | 150 | YES | NO |
| 04 | 04/09/81 | 8114 | 10 | DISCARDS | 57 | YES | NO |

Table 3 (cont'd)

ROCK SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 05 | 16/04/81 | 8103 | 4 | PRE-SORT | 26 | YES | NO |
| 05 | 16/04/81 | 8103 | 5 | PRE-SORT | 14 | YES | NO |
| 05 | 16/04/81 | 8103 | 6 | PRE-SORT | 64 | YES | NO |
| 05 | 16/04/81 | 8103 | 7 | PRE-SORT | 14 | YES | NO |
| 05 | 19/04/81 | 8103 | 15 | PRE-SORT | 38 | YES | NO |
| 05 | 19/04/81 | 8103 | 16 | PRE-SORT | 18 | YES | NO |
| 05 | 26/04/81 | 8104 | 18 | PRE-SORT | 117 | YES | NO |
| 05 | 07/05/81 | 8107 | 6 | PRE-SORT | 61 | YES | YES |
| 05 | 08/05/81 | 8107 | 8 | PRE-SORT | 58 | YES | YES |
| 05 | 10/05/81 | 8107 | 13 | PRE-SORT | 71 | YES | YES |
| 05 | 11/05/81 | 8107 | 15 | PRE-SORT | 64 | YES | YES |
| 05 | 11/05/81 | 8107 | 16 | PRE-SORT | 93 | YES | YES |
| 05 | 11/05/81 | 8107 | 17 | PRE-SORT | 69 | YES | YES |
| 05 | 12/05/81 | 8107 | 21 | PRE-SORT | 74 | YES | YES |
| 05 | 22/05/81 | 8109 | 7 | PRE-SORT | 58 | YES | YES |
| 05 | 22/05/81 | 8109 | 8 | PRE-SORT | 72 | YES | YES |
| 05 | 24/05/81 | 8109 | 13 | PRE-SORT | 65 | YES | YES |
| 05 | 27/05/81 | 8109 | 26 | PRE-SORT | 87 | YES | NO |
| 05 | 27/05/81 | 8109 | 27 | PRE-SORT | 92 | YES | NO |
| 05 | 27/05/81 | 8109 | 28 | PRE-SORT | 98 | YES | NO |
| 05 | 07/05/81 | 8107 | 6 | DISCARDS | 40 | YES | YES |
| 05 | 08/05/81 | 8107 | 8 | DISCARDS | 60 | YES | YES |
| 05 | 10/05/81 | 8107 | 13 | DISCARDS | 84 | YES | YES |
| 05 | 11/05/81 | 8107 | 15 | DISCARDS | 93 | YES | YES |
| 05 | 11/05/81 | 8107 | 16 | DISCARDS | 78 | YES | YES |
| 05 | 11/05/81 | 8107 | 17 | DISCARDS | 50 | YES | YES |
| 05 | 12/05/81 | 8107 | 21 | DISCARDS | 77 | YES | YES |
| 05 | 22/05/81 | 8109 | 7 | DISCARDS | 75 | YES | YES |
| 05 | 22/05/81 | 8109 | 8 | DISCARDS | 54 | YES | YES |
| 05 | 24/05/81 | 8109 | 13 | DISCARDS | 79 | YES | YES |
| 05 | 27/05/81 | 8109 | 26 | DISCARDS | 87 | YES | YES |
| 05 | 27/05/81 | 8109 | 27 | DISCARDS | 109 | YES | YES |
| 05 | 27/05/81 | 8109 | 28 | DISCARDS | 107 | YES | YES |

Table 3 (cont'd)

DOVER SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 07 | | | | | | | |
| 02 | 13/09/81 | 8115 | 9 | PRE-SORT | 70 | YES | NO |
| MAJOR= 08 | | | | | | | |
| 04 | 12/09/81 | 8115 | 3 | PRE-SORT | 61 | YES | NO |
| 04 | 07/09/81 | 8114 | 21 | KEEPERS | 83 | YES | NO |
| 04 | 03/09/81 | 8114 | 2 | PRE-SORT | 98 | YES | NO |
| 04 | 17/09/81 | 8116 | 5 | PRE-SORT | 123 | YES | NO |
| 04 | 19/09/81 | 8116 | 7 | PRE-SORT | 126 | YES | NO |
| 04 | 19/09/81 | 8116 | 8 | PRE-SORT | 113 | YES | NO |
| 04 | 04/09/81 | 8114 | 7 | KEEPERS | 87 | YES | NO |
| 04 | 16/09/81 | 8116 | 2 | KEEPERS | 100 | YES | NO |
| 04 | 17/09/81 | 8116 | 3 | KEEPERS | 103 | YES | NO |
| 04 | 17/09/81 | 8116 | 6 | KEEPERS | 97 | YES | NO |
| 04 | 04/09/81 | 8114 | 8 | KEEPERS | 147 | YES | NO |
| 05 | 16/08/81 | 8112 | 15 | PRE-SORT | 112 | YES | NO |
| 05 | 16/08/81 | 8112 | 15 | DISCARDS | 51 | YES | YES |

Table 3 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 10/03/81 | 8101 | 1 | PRE-SORT | 122 | YES | YES |
| MAJOR= 06 | | | | | | | |
| 08 | 07/06/81 | 8110 | 2 | PRE-SORT | 65 | YES | NO |
| 08 | 11/06/81 | 8110 | 22 | KEEPERS | 74 | YES | NO |
| 08 | 12/03/81 | 8101 | 10 | PRE-SORT | 124 | YES | NO |
| 08 | 07/06/81 | 8110 | 3 | PRE-SORT | 117 | YES | NO |
| 08 | 07/06/81 | 8110 | 4 | PRE-SORT | 210 | YES | NO |
| 08 | 08/06/81 | 8110 | 5 | PRE-SORT | 421 | YES | NO |
| 08 | 08/06/81 | 8110 | 6 | PRE-SORT | 176 | YES | NO |
| 08 | 08/06/81 | 8110 | 7 | PRE-SORT | 174 | YES | NO |
| 08 | 10/06/81 | 8110 | 15 | PRE-SORT | 68 | YES | NO |
| 08 | 14/06/81 | 8110 | 33 | PRE-SORT | 68 | YES | NO |
| 08 | 10/06/81 | 8110 | 15 | DISCARDS | 140 | YES | NO |
| 08 | 10/06/81 | 8110 | 16 | DISCARDS | 128 | YES | NO |
| 08 | 12/06/81 | 8110 | 28 | DISCARDS | 52 | YES | NO |
| 08 | 20/07/81 | 8111 | 3 | PRE-SORT | 49 | YES | NO |
| 08 | 20/07/81 | 8111 | 7 | PRE-SORT | 139 | YES | NO |
| 08 | 21/07/81 | 8111 | 14 | DISCARDS | 72 | YES | NO |
| 08 | 01/04/81 | 8102 | 5 | PRE-SORT | 113 | YES | YES |
| 08 | 01/04/81 | 8102 | 6 | PRE-SORT | 99 | YES | YES |
| 08 | 03/04/81 | 8102 | 10 | PRE-SORT | 72 | YES | YES |
| 08 | 07/04/81 | 8102 | 17 | PRE-SORT | 117 | YES | NO |
| 08 | 07/04/81 | 8102 | 18 | PRE-SORT | 167 | YES | NO |
| 08 | 07/04/81 | 8102 | 19 | PRE-SORT | 102 | YES | NO |
| 08 | 08/04/81 | 8102 | 22 | PRE-SORT | 68 | YES | NO |
| 08 | 13/06/81 | 8110 | 31 | PRE-SORT | 177 | YES | NO |
| 08 | 13/06/81 | 8110 | 29 | DISCARDS | 79 | YES | NO |
| MAJOR= 07 | | | | | | | |
| 02 | 24/05/81 | 8109 | 14 | PRE-SORT | 85 | YES | NO |
| 02 | 25/05/81 | 8109 | 15 | PRE-SORT | 96 | YES | NO |
| 02 | 25/05/81 | 8109 | 17 | PRE-SORT | 48 | YES | NO |
| 02 | 24/05/81 | 8109 | 14 | DISCARDS | 83 | YES | YES |
| 02 | 25/05/81 | 8109 | 17 | DISCARDS | 37 | YES | YES |
| 02 | 14/08/81 | 8112 | 2 | PRE-SORT | 82 | YES | NO |
| 02 | 14/08/81 | 8112 | 4 | PRE-SORT | 114 | YES | NO |

Table 3 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 02 | 14/08/81 | 8112 | 2 | DISCARDS | 65 | YES | YES |
| 02 | 14/08/81 | 8112 | 4 | DISCARDS | 89 | YES | YES |
| 02 | 13/09/81 | 8115 | 7 | PRE-SORT | 83 | YES | NO |
| 02 | 13/09/81 | 8115 | 8 | PRE-SORT | 102 | YES | NO |
| 06 | 09/04/81 | 8102 | 25 | KEEPERS | 90 | YES | NO |
| MAJOR= 08 | | | | | | | |
| 04 | 24/04/81 | 8104 | 9 | PRE-SORT | 94 | YES | NO |
| 04 | 24/04/81 | 8104 | 10 | PRE-SORT | 92 | YES | NO |
| 04 | 29/04/81 | 8105 | 9 | PRE-SORT | 316 | YES | NO |
| 04 | 29/04/81 | 8105 | 10 | PRE-SORT | 229 | YES | NO |
| 04 | 24/08/81 | 8113 | 9 | PRE-SORT | 64 | YES | NO |
| 04 | 24/08/81 | 8113 | 9 | DISCARDS | 38 | YES | YES |
| 04 | 12/09/81 | 8115 | 4 | PRE-SORT | 88 | YES | NO |
| 04 | 24/04/81 | 8104 | 6 | KEEPERS | 52 | YES | NO |
| 04 | 10/05/81 | 8108 | 7 | PRE-SORT | 103 | YES | NO |
| 04 | 11/05/81 | 8108 | 18 | PRE-SORT | 150 | YES | NO |
| 04 | 10/05/81 | 8108 | 9 | KEEPERS | 130 | YES | NO |
| 04 | 10/05/81 | 8108 | 9 | DISCARDS | 197 | YES | NO |
| 04 | 25/08/81 | 8113 | 15 | PRE-SORT | 67 | YES | NO |
| 04 | 25/08/81 | 8113 | 16 | PRE-SORT | 73 | YES | NO |
| 04 | 25/08/81 | 8113 | 15 | DISCARDS | 6 | YES | YES |
| 04 | 03/09/81 | 8114 | 1 | PRE-SORT | 221 | YES | NO |
| 04 | 06/09/81 | 8114 | 15 | PRE-SORT | 75 | YES | NO |
| 04 | 07/09/81 | 8114 | 20 | PRE-SORT | 80 | YES | NO |
| 04 | 12/09/81 | 8115 | 1 | PRE-SORT | 108 | YES | NO |
| 04 | 03/09/81 | 8114 | 4 | KEEPERS | 65 | YES | NO |
| 04 | 04/09/81 | 8114 | 10 | DISCARDS | 114 | YES | NO |
| 04 | 10/05/81 | 8108 | 10 | PRE-SORT | 237 | YES | NO |
| 04 | 10/05/81 | 8108 | 10 | PRE-SORT | 240 | YES | NO |
| 04 | 10/05/81 | 8108 | 11 | PRE-SORT | 253 | YES | NO |
| 04 | 11/05/81 | 8108 | 13 | PRE-SORT | 314 | YES | NO |
| 04 | 11/05/81 | 8108 | 14 | PRE-SORT | 289 | YES | NO |
| 04 | 11/05/81 | 8108 | 14 | KEEPERS | 126 | YES | NO |
| 04 | 11/05/81 | 8108 | 14 | DISCARDS | 209 | YES | NO |
| 05 | 15/04/81 | 8103 | 1 | PRE-SORT | 95 | YES | NO |
| 05 | 16/04/81 | 8103 | 3 | PRE-SORT | 105 | YES | NO |
| 05 | 16/04/81 | 8103 | 4 | PRE-SORT | 46 | YES | NO |
| 05 | 16/04/81 | 8103 | 5 | PRE-SORT | 75 | YES | NO |
| 05 | 16/04/81 | 8103 | 6 | PRE-SORT | 61 | YES | NO |

Table 3 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1981

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 05 | 16/04/81 | 8103 | 7 | PRE-SORT | 117 | YES | NO |
| 05 | 19/04/81 | 8103 | 14 | PRE-SORT | 90 | YES | NO |
| 05 | 19/04/81 | 8103 | 15 | PRE-SORT | 101 | YES | NO |
| 05 | 19/04/81 | 8103 | 16 | PRE-SORT | 131 | YES | NO |
| 05 | 23/04/81 | 8104 | 1 | PRE-SORT | 125 | YES | NO |
| 05 | 23/04/81 | 8104 | 5 | PRE-SORT | 73 | YES | NO |
| 05 | 25/04/81 | 8104 | 11 | PRE-SORT | 164 | YES | NO |
| 05 | 26/04/81 | 8104 | 17 | PRE-SORT | 135 | YES | NO |
| 05 | 23/04/81 | 8104 | 1 | DISCARDS | 124 | YES | NO |
| 05 | 08/05/81 | 8107 | 10 | PRE-SORT | 89 | YES | YES |
| 05 | 10/05/81 | 8107 | 12 | PRE-SORT | 57 | YES | YES |
| 05 | 23/05/81 | 8109 | 10 | PRE-SORT | 75 | YES | YES |
| 05 | 08/05/81 | 8107 | 10 | DISCARDS | 94 | YES | YES |
| 05 | 10/05/81 | 8107 | 12 | DISCARDS | 73 | YES | YES |
| 05 | 23/05/81 | 8109 | 10 | DISCARDS | 53 | YES | YES |
| 05 | 15/08/81 | 8112 | 7 | PRE-SORT | 81 | YES | NO |
| 05 | 15/08/81 | 8112 | 8 | PRE-SORT | 174 | YES | NO |
| 05 | 16/08/81 | 8112 | 16 | PRE-SORT | 115 | YES | NO |
| 05 | 15/08/81 | 8112 | 7 | DISCARDS | 77 | YES | YES |
| 05 | 15/08/81 | 8112 | 8 | DISCARDS | 95 | YES | YES |
| 05 | 16/08/81 | 8112 | 16 | DISCARDS | 82 | YES | YES |

Table 4. PACIFIC COD : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 28/03/82 | 8203 | 2 | PRE-SORT | 117 | YES | YES |
| 11 | 28/03/82 | 8203 | 3 | PRE-SORT | 345 | YES | NO |
| 11 | 06/05/82 | 8206 | 14 | PRE-SORT | 335 | YES | NO |
| 11 | 07/05/82 | 8206 | 16 | PRE-SORT | 99 | YES | NO |
| 11 | 14/05/82 | 8207 | 17 | KEEPERS | 84 | YES | NO |
| 11 | 14/05/82 | 8207 | 17 | DISCARDS | 24 | YES | YES |
| 11 | 24/11/82 | 8216 | 14 | PRE-SORT | 85 | YES | NO |
| MAJOR= 06 | | | | | | | |
| 08 | 11/05/82 | 8207 | 7 | PRE-SORT | 95 | YES | NO |
| 08 | 29/03/82 | 8203 | 9 | KEEPERS | 91 | YES | NO |
| 08 | 29/03/82 | 8203 | 9 | DISCARDS | 71 | YES | YES |
| 08 | 04/05/82 | 8206 | 6 | PRE-SORT | 100 | YES | NO |
| 08 | 04/05/82 | 8206 | 7 | PRE-SORT | 127 | YES | NO |
| 08 | 22/06/82 | 8211 | 14 | KEEPERS | 96 | YES | NO |
| 08 | 22/06/82 | 8211 | 15 | PRE-SORT | 73 | YES | NO |
| 08 | 23/06/82 | 8211 | 18 | PRE-SORT | 62 | YES | NO |
| 08 | 23/06/82 | 8211 | 19 | KEEPERS | 83 | YES | NO |
| 08 | 10/05/82 | 8207 | 1 | PRE-SORT | 94 | YES | NO |
| 08 | 10/05/82 | 8207 | 2 | PRE-SORT | 91 | YES | NO |
| MAJOR= 07 | | | | | | | |
| 02 | 28/05/82 | 8210 | 9 | PRE-SORT | 114 | YES | NO |
| 02 | 28/05/82 | 8210 | 7 | DISCARDS | 110 | YES | YES |
| 02 | 28/05/82 | 8210 | 9 | DISCARDS | 97 | YES | NO |
| 02 | 22/11/82 | 8216 | 7 | PRE-SORT | 94 | YES | NO |
| MAJOR= 08 | | | | | | | |
| 04 | 03/04/82 | 8204 | 1 | KEEPERS | 58 | YES | NO |
| 04 | 13/05/82 | 8208 | 5 | PRE-SORT | 105 | YES | YES |
| 04 | 13/05/82 | 8208 | 7 | PRE-SORT | 110 | YES | NO |
| 04 | 14/05/82 | 8208 | 9 | PRE-SORT | 90 | YES | NO |
| 04 | 14/05/82 | 8208 | 12 | PRE-SORT | 86 | YES | NO |

Table 4 (cont'd)

PACIFIC COD : OBSERVER SAMPLES, 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 04 | 16/05/82 | 8208 | 18 | PRE-SORT | 96 | YES | YES |
| 04 | 13/09/82 | 8214 | 6 | PRE-SORT | 61 | YES | NO |
| 04 | 17/02/82 | 8201 | 13 | KEEPERS | 15 | YES | NO |
| 04 | 22/03/82 | 8202 | 7 | PRE-SORT | 101 | YES | NO |
| 04 | 22/07/82 | 8212 | 4 | PRE-SORT | 150 | YES | NO |
| 04 | 22/07/82 | 8212 | 7 | PRE-SORT | 90 | YES | NO |
| 04 | 23/07/82 | 8212 | 10 | PRE-SORT | 150 | YES | NO |
| 04 | 24/07/82 | 8212 | 15 | PRE-SORT | 128 | YES | NO |
| 04 | 25/07/82 | 8212 | 21 | PRE-SORT | 137 | YES | NO |
| 04 | 14/09/82 | 8214 | 10 | PRE-SORT | 64 | YES | NO |
| 04 | 14/09/82 | 8214 | 12 | PRE-SORT | 73 | YES | NO |
| 04 | 17/09/82 | 8214 | 29 | PRE-SORT | 94 | YES | NO |
| 04 | 17/09/82 | 8214 | 31 | PRE-SORT | 67 | YES | NO |
| 04 | 18/09/82 | 8214 | 33 | PRE-SORT | 73 | YES | NO |
| 04 | 18/09/82 | 8214 | 34 | PRE-SORT | 85 | YES | NO |
| 04 | 19/09/82 | 8214 | 38 | PRE-SORT | 53 | YES | NO |
| 04 | 19/09/82 | 8214 | 39 | PRE-SORT | 79 | YES | NO |
| 04 | 15/02/82 | 8201 | 3 | PRE-SORT | 67 | YES | NO |
| 05 | 23/03/82 | 8202 | 10 | PRE-SORT | 203 | YES | YES |
| 05 | 23/03/82 | 8202 | 11 | PRE-SORT | 107 | YES | NO |
| 05 | 25/03/82 | 8202 | 13 | PRE-SORT | 198 | YES | NO |
| 05 | 26/03/82 | 8202 | 16 | PRE-SORT | 170 | YES | NO |
| 05 | 26/03/82 | 8202 | 17 | PRE-SORT | 168 | YES | NO |
| 05 | 23/03/82 | 8202 | 10 | KEEPERS | 31 | YES | YES |
| 05 | 04/04/82 | 8204 | 5 | PRE-SORT | 192 | YES | NO |
| 05 | 05/04/82 | 8204 | 11 | PRE-SORT | 221 | YES | NO |
| 05 | 08/04/82 | 8205 | 8 | KEEPERS | 73 | YES | NO |
| 05 | 08/04/82 | 8205 | 9 | KEEPERS | 88 | YES | NO |
| 05 | 08/04/82 | 8205 | 10 | KEEPERS | 86 | YES | NO |
| 05 | 09/04/82 | 8205 | 14 | KEEPERS | 121 | YES | NO |
| 05 | 22/05/82 | 8209 | 8 | PRE-SORT | 66 | YES | NO |
| 05 | 22/05/82 | 8209 | 8 | DISCARDS | 15 | YES | NO |
| 05 | 25/05/82 | 8209 | 21 | DISCARDS | 30 | YES | NO |
| 05 | 21/11/82 | 8216 | 3 | PRE-SORT | 127 | YES | NO |
| 05 | 04/04/82 | 8204 | 8 | PRE-SORT | 78 | YES | NO |

Table 4 (cont'd)

POLLOCK : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 04 | 18/03/82 | 8202 | 2 | DISCARDS | 85 | YES | YES |

PACIFIC OCEAN PERCH : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 06 | | | | | | | |
| 08 | 10/05/82 | 8206 | 27 | PRE-SORT | 207 | YES | NO |
| 08 | 09/05/82 | 8206 | 23 | KEEPERS | 231 | YES | NO |

SABLEFISH : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 05 | 07/04/82 | 8204 | 22 | PRE-SORT | 164 | YES | NO |
| 05 | 20/05/82 | 8209 | 1 | PRE-SORT | 68 | YES | YES |
| 05 | 20/05/82 | 8209 | 4 | PRE-SORT | 88 | YES | YES |
| 05 | 24/05/82 | 8209 | 13 | PRE-SORT | 50 | YES | YES |
| 05 | 24/05/82 | 8209 | 15 | PRE-SORT | 71 | YES | YES |
| 05 | 24/05/82 | 8209 | 18 | PRE-SORT | 99 | YES | YES |
| 05 | 30/05/82 | 8210 | 18 | PRE-SORT | 72 | YES | YES |
| 05 | 30/05/82 | 8210 | 19 | PRE-SORT | 93 | YES | YES |
| 05 | 31/05/82 | 8210 | 23 | PRE-SORT | 109 | YES | YES |
| 05 | 20/11/82 | 8216 | 1 | PRE-SORT | 116 | YES | NO |

Table 4 (cont'd)

LINGCOD : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 06 | | | | | | | |
| 08 | 11/05/82 | 8207 | 6 | PRE-SORT | 75 | YES | NO |
| 08 | 11/05/82 | 8206 | 30 | PRE-SORT | 98 | YES | NO |
| 08 | 12/05/82 | 8207 | 10 | PRE-SORT | 48 | YES | NO |
| 08 | 26/03/82 | 8203 | 1 | PRE-SORT | 33 | YES | YES |

REX SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 05 | 30/05/82 | 8210 | 17 | PRE-SORT | 100 | YES | YES |

Table 4 (cont'd)

HALIBUT : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| MAJOR= 05 | | | | | | |
| 11 | 28/03/82 | 8203 | 6 | 100.0 | 20 | 63 |
| 11 | 29/03/82 | 8203 | 7 | 100.0 | 7 | 35 |
| 11 | 10/04/82 | 8204 | 34 | 100.0 | 270 | 878 |
| 11 | 06/05/82 | 8206 | 13 | 100.0 | 6 | 23 |
| 11 | 06/05/82 | 8206 | 15 | 100.0 | 19 | 78 |
| 11 | 07/05/82 | 8206 | 16 | 100.0 | 28 | 113 |
| 11 | 07/05/82 | 8206 | 17 | 100.0 | 5 | 27 |
| 11 | 07/05/82 | 8206 | 18 | 100.0 | 7 | 50 |
| 11 | 08/05/82 | 8206 | 19 | 100.0 | 5 | 23 |
| 11 | 08/05/82 | 8206 | 21 | 100.0 | 6 | 35 |
| 11 | 09/05/82 | 8206 | 22 | 100.0 | 4 | 28 |
| 11 | 15/05/82 | 8207 | 21 | 100.0 | 2 | 5 |
| 11 | 15/05/82 | 8207 | 22 | 100.0 | 1 | 5 |
| 11 | 15/05/82 | 8207 | 24 | 100.0 | 13 | 32 |
| 11 | 24/11/82 | 8216 | 14 | 100.0 | 14 | 33 |
| 11 | 24/11/82 | 8216 | 15 | 100.0 | 4 | 11 |
| 11 | 24/11/82 | 8216 | 16 | 100.0 | 10 | 27 |
| 11 | 24/11/82 | 8216 | 17 | 100.0 | 2 | 5 |
| MAJOR= 06 | | | | | | |
| 08 | 10/05/82 | 8206 | 26 | 100.0 | 1 | 96 |
| 08 | 10/05/82 | 8206 | 28 | 100.0 | 4 | 27 |
| 08 | 11/05/82 | 8207 | 4 | 100.0 | 12 | 38 |
| 08 | 11/05/82 | 8206 | 29 | 100.0 | 13 | 54 |
| 08 | 11/05/82 | 8206 | 30 | 100.0 | 3 | 24 |
| 08 | 29/03/82 | 8203 | 9 | 100.0 | 8 | 23 |
| 08 | 29/03/82 | 8203 | 10 | 100.0 | 5 | 15 |
| 08 | 29/03/82 | 8203 | 11 | 100.0 | 2 | 6 |
| 08 | 30/03/82 | 8203 | 12 | 100.0 | 39 | 115 |
| 08 | 04/05/82 | 8206 | 6 | 100.0 | 5 | 30 |
| 08 | 04/05/82 | 8206 | 7 | 100.0 | 8 | 44 |
| 08 | 04/05/82 | 8206 | 8 | 100.0 | 32 | 121 |
| 08 | 04/05/82 | 8206 | 9 | 100.0 | 24 | 144 |
| 08 | 05/05/82 | 8206 | 10 | 100.0 | 5 | 22 |
| 08 | 12/05/82 | 8207 | 10 | 100.0 | 9 | 27 |
| 08 | 12/05/82 | 8207 | 11 | 66.7 | 21 | 42 |
| 08 | 23/06/82 | 8211 | 17 | 17.4 | 195 | 65 |
| 08 | 24/06/82 | 8211 | 22 | 12.3 | 400 | 131 |
| 08 | 24/06/82 | 8211 | 26 | 9.4 | 360 | 65 |
| 08 | 24/06/82 | 8211 | 27 | 13.8 | 240 | 96 |
| 08 | 30/03/82 | 8203 | 14 | 100.0 | 20 | 81 |
| 08 | 03/05/82 | 8206 | 4 | 100.0 | 26 | 133 |

Table 4 (cont'd)

HALIBUT : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| 08 | 21/06/82 | 8211 | 7 | 100.0 | 39 | 118 |
| 08 | 21/06/82 | 8211 | 10 | 21.8 | 197 | 195 |
| MAJOR= 07 | | | | | | |
| 02 | 31/03/82 | 8203 | 15 | 100.0 | 31 | 79 |
| 02 | 31/03/82 | 8203 | 16 | 100.0 | 45 | 113 |
| 02 | 31/03/82 | 8203 | 17 | 100.0 | 8 | 134 |
| 02 | 31/03/82 | 8203 | 18 | 100.0 | 67 | 144 |
| 02 | 07/04/82 | 8204 | 24 | 100.0 | 99 | 195 |
| 02 | 28/05/82 | 8210 | 5 | 100.0 | 18 | 57 |
| 02 | 28/05/82 | 8210 | 6 | 100.0 | 5 | 68 |
| 02 | 28/05/82 | 8210 | 10 | 100.0 | 3 | 11 |
| 02 | 28/05/82 | 8210 | 12 | 100.0 | 5 | 11 |
| 02 | 28/05/82 | 8210 | 13 | 100.0 | 2 | 6 |
| 02 | 29/05/82 | 8210 | 14 | 100.0 | 11 | 22 |
| 02 | 29/05/82 | 8210 | 15 | 100.0 | 1 | 2 |
| 02 | 04/06/82 | 8213 | 1 | 100.0 | 35 | 157 |
| 02 | 04/06/82 | 8213 | 2 | 100.0 | 8 | 19 |
| 02 | 04/06/82 | 8213 | 3 | 100.0 | 18 | 46 |
| 02 | 04/06/82 | 8213 | 4 | 100.0 | 9 | 30 |
| 02 | 04/06/82 | 8213 | 5 | 100.0 | 2 | 6 |
| 02 | 04/06/82 | 8213 | 6 | 100.0 | 2 | 4 |
| 02 | 04/06/82 | 8213 | 7 | 100.0 | 7 | 11 |
| 02 | 07/06/82 | 8213 | 15 | 100.0 | 6 | 14 |
| 02 | 07/06/82 | 8213 | 16 | 100.0 | 6 | 20 |
| 02 | 07/06/82 | 8213 | 17 | 100.0 | 3 | 7 |
| 02 | 07/06/82 | 8213 | 19 | 100.0 | 19 | 37 |
| 02 | 08/06/82 | 8213 | 20 | 100.0 | 1 | 4 |
| 02 | 08/06/82 | 8213 | 21 | 100.0 | 1 | 2 |
| 02 | 08/06/82 | 8213 | 22 | 100.0 | 4 | 13 |
| 02 | 08/06/82 | 8213 | 23 | 100.0 | 3 | 12 |
| 02 | 08/06/82 | 8213 | 25 | 100.0 | 1 | 4 |
| 02 | 09/06/82 | 8213 | 27 | 100.0 | 7 | 25 |
| 02 | 09/06/82 | 8213 | 28 | 100.0 | 1 | 4 |
| 02 | 09/06/82 | 8213 | 29 | 100.0 | 2 | 8 |
| 02 | 09/06/82 | 8213 | 30 | 100.0 | 8 | 29 |
| 02 | 09/06/82 | 8213 | 31 | 100.0 | 4 | 8 |
| 02 | 09/06/82 | 8213 | 32 | 100.0 | 20 | 48 |
| 02 | 26/09/82 | 8215 | 19 | 100.0 | 13 | 104 |
| 02 | 26/09/82 | 8215 | 20 | 100.0 | 8 | 62 |
| 02 | 27/09/82 | 8215 | 24 | 100.0 | 2 | 6 |
| 02 | 21/11/82 | 8216 | 6 | 100.0 | 6 | 23 |
| 02 | 22/11/82 | 8216 | 7 | 100.0 | 4 | 10 |

Table 4 (cont'd)

HALIBUT : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| MAJOR= 07 | | | | | | |
| 02 | 22/11/82 | 8216 | 8 | 100.0 | 3 | 6 |
| 02 | 22/11/82 | 8216 | 10 | 100.0 | 2 | 8 |
| 02 | 23/11/82 | 8216 | 11 | 100.0 | 10 | 23 |
| 02 | 23/11/82 | 8216 | 12 | 100.0 | 3 | 13 |
| 02 | 23/11/82 | 8216 | 13 | 100.0 | 1 | 2 |
| MAJOR= 08 | | | | | | |
| 04 | 22/03/82 | 8202 | 8 | 100.0 | 8 | 9 |
| 04 | 12/05/82 | 8208 | 4 | 100.0 | 39 | 75 |
| 04 | 13/05/82 | 8208 | 6 | 100.0 | 46 | 107 |
| 04 | 13/05/82 | 8208 | 8 | 100.0 | 48 | 101 |
| 04 | 14/05/82 | 8208 | 10 | 100.0 | 60 | 135 |
| 04 | 14/05/82 | 8208 | 11 | 100.0 | 46 | 115 |
| 04 | 15/05/82 | 8208 | 13 | 100.0 | 27 | 59 |
| 04 | 15/05/82 | 8208 | 14 | 100.0 | 41 | 105 |
| 04 | 15/05/82 | 8208 | 15 | 100.0 | 33 | 70 |
| 04 | 15/05/82 | 8208 | 17 | 100.0 | 99 | 215 |
| 04 | 16/05/82 | 8208 | 19 | 100.0 | 55 | 108 |
| 04 | 25/09/82 | 8215 | 14 | 100.0 | 11 | 33 |
| 04 | 27/09/82 | 8215 | 22 | 100.0 | 9 | 64 |
| 04 | 16/02/82 | 8201 | 8 | 100.0 | 66 | 205 |
| 04 | 17/02/82 | 8201 | 12 | 100.0 | 79 | 252 |
| 04 | 19/02/82 | 8201 | 16 | 100.0 | 40 | 183 |
| 04 | 21/02/82 | 8201 | 21 | 100.0 | 107 | 247 |
| 04 | 18/03/82 | 8202 | 4 | 100.0 | 4 | 9 |
| 04 | 03/04/82 | 8204 | 4 | 100.0 | 60 | 176 |
| 04 | 07/04/82 | 8205 | 4 | 100.0 | 53 | 127 |
| 04 | 10/04/82 | 8205 | 20 | 100.0 | 25 | 98 |
| 04 | 21/07/82 | 8212 | 2 | 100.0 | 121 | 364 |
| 04 | 23/07/82 | 8212 | 11 | 100.0 | 128 | 382 |
| 04 | 24/07/82 | 8212 | 14 | 100.0 | 86 | 276 |
| 04 | 24/07/82 | 8212 | 16 | 100.0 | 76 | 224 |
| 04 | 25/07/82 | 8212 | 19 | 100.0 | 40 | 142 |
| 04 | 18/09/82 | 8214 | 34 | 100.0 | 9 | 9 |
| 04 | 23/09/82 | 8215 | 1 | 100.0 | 8 | 51 |
| 04 | 12/09/82 | 8214 | 4 | UNKNOWN | UNKNOWN | 124 |
| 04 | 14/09/82 | 8214 | 12 | 68.0 | 25 | 34 |
| 04 | 16/09/82 | 8214 | 27 | UNKNOWN | UNKNOWN | 85 |
| 04 | 17/09/82 | 8214 | 30 | UNKNOWN | UNKNOWN | 95 |
| 04 | 23/09/82 | 8215 | 2 | UNKNOWN | UNKNOWN | 28 |
| 04 | 23/09/82 | 8215 | 5 | 39.6 | 53 | 36 |
| 04 | 15/02/82 | 8201 | 4 | 100.0 | 7 | 22 |
| 04 | 15/09/82 | 8214 | 19 | 100.0 | 4 | 10 |

Table 4 (cont'd)

HALIBUT : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| 04 | 15/09/82 | 8214 | 20 | 100.0 | 1 | 3 |
| 04 | 16/09/82 | 8214 | 23 | 100.0 | 1 | 12 |
| 04 | 16/09/82 | 8214 | 24 | 100.0 | 2 | 15 |
| 04 | 16/09/82 | 8214 | 25 | 100.0 | 24 | 100 |
| 04 | 16/09/82 | 8214 | 26 | 100.0 | 53 | 296 |
| 04 | 15/09/82 | 8214 | 17 | 100.0 | 13 | 41 |
| 04 | 15/09/82 | 8214 | 18 | 100.0 | 26 | 109 |
| 04 | 16/09/82 | 8214 | 22 | UNKNOWN | UNKNOWN | 249 |
| 05 | 24/03/82 | 8202 | 12 | 100.0 | 1 | 2 |
| 05 | 26/03/82 | 8202 | 16 | 100.0 | 4 | 17 |
| 05 | 26/03/82 | 8202 | 18 | 100.0 | 6 | 3 |
| 05 | 05/04/82 | 8204 | 11 | 100.0 | 31 | 78 |
| 05 | 05/04/82 | 8204 | 12 | 100.0 | 25 | 51 |
| 05 | 05/04/82 | 8204 | 13 | 100.0 | 15 | 30 |
| 05 | 05/04/82 | 8204 | 14 | 100.0 | 13 | 28 |
| 05 | 06/04/82 | 8204 | 20 | 100.0 | 51 | 171 |
| 05 | 07/04/82 | 8204 | 21 | 100.0 | 36 | 108 |
| 05 | 07/04/82 | 8204 | 22 | 100.0 | 23 | 66 |
| 05 | 08/04/82 | 8205 | 8 | 100.0 | 6 | 9 |
| 05 | 08/04/82 | 8205 | 12 | 100.0 | 3 | 7 |
| 05 | 20/05/82 | 8209 | 3 | 88.9 | 9 | 21 |
| 05 | 22/05/82 | 8209 | 7 | 100.0 | 6 | 38 |
| 05 | 22/05/82 | 8209 | 9 | 100.0 | 18 | 53 |
| 05 | 22/05/82 | 8209 | 10 | 100.0 | 7 | 19 |
| 05 | 24/05/82 | 8209 | 12 | 100.0 | 9 | 32 |
| 05 | 24/05/82 | 8209 | 13 | 100.0 | 4 | 7 |
| 05 | 24/05/82 | 8209 | 14 | 100.0 | 11 | 26 |
| 05 | 24/05/82 | 8209 | 15 | 100.0 | 54 | 172 |
| 05 | 24/05/82 | 8209 | 16 | 97.7 | 43 | 130 |
| 05 | 24/05/82 | 8209 | 18 | 100.0 | 6 | 20 |
| 05 | 25/05/82 | 8209 | 19 | 100.0 | 13 | 34 |
| 05 | 25/05/82 | 8209 | 20 | 100.0 | 10 | 21 |
| 05 | 27/05/82 | 8210 | 1 | 100.0 | 5 | 13 |
| 05 | 27/05/82 | 8210 | 2 | 100.0 | 6 | 27 |
| 05 | 27/05/82 | 8210 | 3 | 100.0 | 4 | 13 |
| 05 | 30/05/82 | 8210 | 16 | 100.0 | 3 | 10 |
| 05 | 30/05/82 | 8210 | 17 | 100.0 | 3 | 10 |
| 05 | 30/05/82 | 8210 | 19 | 100.0 | 5 | 10 |
| 05 | 31/05/82 | 8210 | 21 | 100.0 | 2 | 5 |
| 05 | 31/05/82 | 8210 | 22 | 100.0 | 3 | 13 |
| 05 | 31/05/82 | 8210 | 24 | 100.0 | 1 | 2 |
| 05 | 30/05/82 | 8210 | 18 | 66.7 | 3 | 6 |
| 05 | 06/06/82 | 8213 | 12 | 100.0 | 1 | 4 |

Table 4 (cont'd)

HALIBUT : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | PROPORTION MEASURED | TOTAL NUMBER OF HALIBUT IN TOW | WEIGHT OF MEASURED HALIBUT (KG) |
|------------|-----------|-----------|------|---------------------|--------------------------------|---------------------------------|
| 05 | 06/06/82 | 8213 | 13 | 100.0 | 1 | 5 |
| 05 | 28/09/82 | 8215 | 26 | 100.0 | 3 | 3 |
| 05 | 20/11/82 | 8216 | 1 | 100.0 | 70 | 161 |
| 05 | 21/11/82 | 8216 | 3 | 100.0 | 21 | 39 |
| 05 | 21/11/82 | 8216 | 4 | 100.0 | 14 | 37 |
| 05 | 27/05/82 | 8210 | 4 | 100.0 | 1 | 1 |

BUTTER SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 08 | | | | | | | |
| 04 | 15/02/82 | 8201 | 3 | DISCARDS | 99 | YES | YES |

Table 4 (cont'd)

ROCK SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 20/06/82 | 8211 | 1 | PRE-SORT | 93 | YES | YES |
| 11 | 27/06/82 | 8211 | 39 | PRE-SORT | 77 | YES | YES |
| MAJOR= 06 | | | | | | | |
| 08 | 23/06/82 | 8211 | 17 | PRE-SORT | 94 | YES | YES |
| 08 | 23/06/82 | 8211 | 21 | PRE-SORT | 135 | YES | YES |
| 08 | 24/06/82 | 8211 | 22 | PRE-SORT | 212 | YES | YES |
| 08 | 21/06/82 | 8211 | 11 | PRE-SORT | 202 | YES | YES |
| 08 | 21/06/82 | 8211 | 7 | KEEPERS | 67 | YES | NO |
| 08 | 21/06/82 | 8211 | 10 | KEEPERS | 82 | YES | NO |
| MAJOR= 07 | | | | | | | |
| 02 | 31/03/82 | 8203 | 16 | KEEPERS | 135 | YES | NO |
| 02 | 31/03/82 | 8203 | 18 | KEEPERS | 85 | YES | NO |
| 02 | 31/03/82 | 8203 | 16 | DISCARDS | 112 | YES | YES |
| 02 | 07/04/82 | 8204 | 23 | KEEPERS | 117 | YES | NO |
| 02 | 07/04/82 | 8204 | 23 | DISCARDS | 209 | YES | NO |
| 02 | 08/04/82 | 8204 | 27 | DISCARDS | 176 | YES | NO |
| 02 | 28/05/82 | 8210 | 5 | PRE-SORT | 70 | YES | NO |
| 02 | 28/05/82 | 8210 | 5 | DISCARDS | 91 | YES | YES |
| 02 | 23/11/82 | 8216 | 11 | KEEPERS | 154 | YES | YES |
| MAJOR= 08 | | | | | | | |
| 05 | 21/11/82 | 8216 | 3 | PRE-SORT | 158 | YES | NO |
| 05 | 21/11/82 | 8216 | 4 | PRE-SORT | 102 | YES | YES |
| 05 | 22/05/82 | 8209 | 11 | DISCARDS | 36 | YES | YES |
| 05 | 21/11/82 | 8216 | 5 | PRE-SORT | 95 | YES | NO |

Table 4 (cont'd)

DOVER SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED | |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|-----|
| MAJOR= 06 | | | | | | | | |
| | 08 | 20/06/82 | 8211 | 3 | PRE-SORT | 120 | YES | YES |
| MAJOR= 08 | | | | | | | | |
| | 04 | 14/09/82 | 8214 | 15 | PRE-SORT | 56 | YES | NO |
| | 04 | 15/09/82 | 8214 | 16 | PRE-SORT | 74 | YES | NO |
| | 04 | 15/09/82 | 8214 | 18 | PRE-SORT | 61 | YES | NO |
| | 04 | 15/09/82 | 8214 | 19 | PRE-SORT | 79 | YES | NO |
| | 04 | 16/09/82 | 8214 | 23 | PRE-SORT | 89 | YES | NO |
| | 04 | 24/09/82 | 8215 | 9 | PRE-SORT | 51 | YES | YES |

Table 4 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| MAJOR= 05 | | | | | | | |
| 11 | 13/05/82 | 8207 | 13 | PRE-SORT | 124 | YES | YES |
| 11 | 13/05/82 | 8207 | 14 | PRE-SORT | 93 | YES | YES |
| 11 | 13/05/82 | 8207 | 15 | PRE-SORT | 110 | YES | YES |
| 11 | 14/05/82 | 8207 | 19 | PRE-SORT | 107 | YES | YES |
| 11 | 15/05/82 | 8207 | 21 | PRE-SORT | 64 | YES | YES |
| 11 | 25/06/82 | 8211 | 31 | PRE-SORT | 168 | YES | YES |
| 11 | 26/06/82 | 8211 | 33 | PRE-SORT | 181 | YES | YES |
| 11 | 26/06/82 | 8211 | 36 | PRE-SORT | 82 | YES | YES |
| 11 | 27/06/82 | 8211 | 40 | PRE-SORT | 128 | YES | YES |
| MAJOR= 06 | | | | | | | |
| 08 | 11/05/82 | 8206 | 29 | PRE-SORT | 176 | YES | YES |
| 08 | 24/06/82 | 8211 | 25 | PRE-SORT | 91 | YES | YES |
| 08 | 22/06/82 | 8211 | 13 | DISCARDS | 173 | YES | YES |
| 08 | 24/06/82 | 8211 | 24 | DISCARDS | 128 | YES | YES |
| 08 | 26/03/82 | 8203 | 1 | PRE-SORT | 225 | YES | YES |
| 08 | 30/03/82 | 8203 | 14 | PRE-SORT | 176 | YES | YES |
| 08 | 03/05/82 | 8206 | 4 | PRE-SORT | 132 | YES | NO |
| 08 | 10/05/82 | 8207 | 3 | PRE-SORT | 122 | YES | YES |
| MAJOR= 07 | | | | | | | |
| 02 | 31/03/82 | 8203 | 17 | PRE-SORT | 187 | YES | YES |
| 02 | 31/03/82 | 8203 | 19 | PRE-SORT | 163 | YES | YES |
| 02 | 21/11/82 | 8216 | 6 | PRE-SORT | 102 | YES | YES |
| 02 | 23/11/82 | 8216 | 12 | PRE-SORT | 133 | YES | YES |
| 02 | 21/11/82 | 8216 | 6 | DISCARDS | 67 | YES | YES |
| MAJOR= 08 | | | | | | | |
| 04 | 22/03/82 | 8202 | 5 | PRE-SORT | 61 | YES | YES |
| 04 | 22/03/82 | 8202 | 5 | KEEPERS | 69 | YES | NO |
| 04 | 22/03/82 | 8202 | 5 | DISCARDS | 86 | YES | YES |
| 04 | 03/04/82 | 8204 | 2 | PRE-SORT | 181 | YES | YES |
| 04 | 11/04/82 | 8205 | 21 | PRE-SORT | 140 | YES | NO |
| 04 | 11/04/82 | 8205 | 22 | PRE-SORT | 288 | YES | YES |
| 04 | 03/04/82 | 8204 | 1 | KEEPERS | 149 | YES | YES |
| 04 | 03/04/82 | 8204 | 3 | KEEPERS | 158 | YES | YES |
| 04 | 15/05/82 | 8208 | 16 | PRE-SORT | 100 | YES | NO |
| 04 | 15/05/82 | 8208 | 16 | DISCARDS | 81 | YES | YES |
| 04 | 13/09/82 | 8214 | 7 | PRE-SORT | 82 | YES | YES |
| 04 | 13/09/82 | 8214 | 8 | PRE-SORT | 80 | YES | YES |
| 04 | 25/09/82 | 8215 | 15 | PRE-SORT | 74 | YES | YES |
| 04 | 17/02/82 | 8201 | 11 | PRE-SORT | 126 | YES | YES |
| 04 | 17/02/82 | 8201 | 13 | PRE-SORT | 78 | YES | YES |

Table 4 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 04 | 19/02/82 | 8201 | 15 | PRE-SORT | 127 | YES | YES |
| 04 | 20/02/82 | 8201 | 18 | PRE-SORT | 104 | YES | YES |
| 04 | 21/02/82 | 8201 | 20 | PRE-SORT | 112 | YES | YES |
| 04 | 23/02/82 | 8202 | 9 | PRE-SORT | 85 | YES | NO |
| 04 | 16/02/82 | 8201 | 6 | KEEPERS | 107 | YES | NO |
| 04 | 16/02/82 | 8201 | 7 | KEEPERS | 108 | YES | NO |
| 04 | 16/02/82 | 8201 | 8 | KEEPERS | 72 | YES | NO |
| 04 | 19/02/82 | 8201 | 15 | KEEPERS | 65 | YES | NO |
| 04 | 19/02/82 | 8201 | 17 | KEEPERS | 94 | YES | NO |
| 04 | 21/02/82 | 8201 | 21 | KEEPERS | 50 | YES | NO |
| 04 | 20/02/82 | 8201 | 19 | DISCARDS | 56 | YES | YES |
| 04 | 21/02/82 | 8201 | 22 | DISCARDS | 50 | YES | YES |
| 04 | 18/03/82 | 8202 | 4 | KEEPERS | 143 | YES | NO |
| 04 | 22/03/82 | 8202 | 6 | KEEPERS | 150 | YES | NO |
| 04 | 23/03/82 | 8202 | 9 | KEEPERS | 61 | YES | NO |
| 04 | 22/03/82 | 8202 | 6 | DISCARDS | 50 | YES | YES |
| 04 | 23/03/82 | 8202 | 9 | DISCARDS | 123 | YES | NO |
| 04 | 06/04/82 | 8205 | 1 | PRE-SORT | 81 | YES | YES |
| 04 | 07/04/82 | 8205 | 5 | PRE-SORT | 119 | YES | YES |
| 04 | 10/04/82 | 8205 | 19 | PRE-SORT | 106 | YES | YES |
| 04 | 10/04/82 | 8205 | 20 | PRE-SORT | 96 | YES | YES |
| 04 | 23/07/82 | 8212 | 9 | PRE-SORT | 335 | YES | YES |
| 04 | 24/07/82 | 8212 | 13 | PRE-SORT | 227 | YES | YES |
| 04 | 14/09/82 | 8214 | 10 | PRE-SORT | 77 | YES | YES |
| 04 | 14/09/82 | 8214 | 11 | PRE-SORT | 82 | YES | YES |
| 04 | 14/09/82 | 8214 | 12 | PRE-SORT | 74 | YES | YES |
| 04 | 17/09/82 | 8214 | 28 | PRE-SORT | 74 | YES | YES |
| 04 | 23/09/82 | 8215 | 2 | PRE-SORT | 73 | YES | YES |
| 04 | 24/09/82 | 8215 | 6 | PRE-SORT | 61 | YES | YES |
| 04 | 15/02/82 | 8201 | 4 | PRE-SORT | 142 | YES | YES |
| 04 | 14/02/82 | 8201 | 2 | DISCARDS | 39 | YES | YES |
| 05 | 14/02/82 | 8201 | 1 | PRE-SORT | 112 | YES | YES |
| 05 | 27/03/82 | 8202 | 19 | PRE-SORT | 73 | YES | YES |
| 05 | 27/03/82 | 8202 | 19 | KEEPERS | 65 | YES | NO |
| 05 | 25/03/82 | 8202 | 13 | DISCARDS | 71 | YES | YES |
| 05 | 27/03/82 | 8202 | 19 | DISCARDS | 51 | YES | NO |
| 05 | 06/04/82 | 8204 | 18 | PRE-SORT | 165 | YES | YES |
| 05 | 10/04/82 | 8205 | 18 | PRE-SORT | 85 | YES | YES |
| 05 | 10/04/82 | 8205 | 18 | KEEPERS | 64 | YES | NO |
| 05 | 07/04/82 | 8204 | 21 | DISCARDS | 201 | YES | YES |
| 05 | 10/04/82 | 8205 | 18 | DISCARDS | 82 | YES | NO |
| 05 | 22/05/82 | 8209 | 7 | PRE-SORT | 83 | YES | NO |
| 05 | 24/05/82 | 8209 | 12 | PRE-SORT | 90 | YES | NO |
| 05 | 25/05/82 | 8209 | 20 | PRE-SORT | 107 | YES | NO |
| 05 | 20/05/82 | 8209 | 5 | DISCARDS | 106 | YES | YES |
| 05 | 22/05/82 | 8209 | 7 | DISCARDS | 67 | YES | YES |

Table 4 (cont'd)

ENGLISH SOLE : OBSERVER SAMPLES 1982

| MINOR AREA | HAUL DATE | TRIP CODE | HAUL | SAMPLE TYPE | NUMBER SAMPLE | LENGTH RECORDED | SEX RECORDED |
|------------|-----------|-----------|------|-------------|---------------|-----------------|--------------|
| 05 | 24/05/82 | 8209 | 12 | DISCARDS | 102 | YES | YES |
| 05 | 25/05/82 | 8209 | 20 | DISCARDS | 115 | YES | YES |
| 05 | 28/09/82 | 8215 | 26 | PRE-SORT | 83 | YES | YES |
| 05 | 20/11/82 | 8216 | 1 | PRE-SORT | 235 | YES | YES |

